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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/828,997

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David W. Caldwell

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EXAMINER

ARBES, CARL J

ART UNIT

PAPER NUMBER

3729

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/828,997	<b>Applicant(s)</b> CALDWELL ET AL.	
	<b>Examiner</b> C. J. Arbes	<b>Art Unit</b> 3729	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19, 26-34 and 36-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19, 26-34 and 36-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

The **Final Rejection** mailed on or about 09 December 2008 is rescinded in favor of a new **Final Rejection** provided hereinafter.

Claims 1-19, 26-34 and 36-46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was not described in the Specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicants now urge that there has to be a same etchant agent that is used to etch Applicants' 1st and 2<sup>nd</sup> conductive layers. They indicate this is one distinguishing aspect of their Application *vis-a-vis* the formerly applied Prior Art. This being said, it appears and now is held that choice of etching agents is critical to this claimed invention. Given this view and reading Applicants' terse approximately 12 page Specification it appears that little or nothing is disclosed with respect to the appropriate etchant/s that can be used to achieve the claimed invention. That is not one example of any specific etchant or agent which is provided that one can use to do what Applicants wish it to accomplish. Not any publications, references to the literature, affidavits or the like is offered or recited to allow a PHOSITA to make and use the claimed invention. There is little or no guidance to allow a PHOSITA to perform the claimed invention. The claims merely recite that this is what is done. Therefore it is held that there is lack of enablement for Applicants' invention based on the Office's above provided reasoning.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15, 16, 32-35, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barraclough, Pat. No. 3,864,180; hereinafter Barraclough..

Barraclough teaches a process for forming thin-film circuit device wherein a substrate is covered with a thin-film layer of material having electrical characteristics corresponding to the circuit device, which is covered by an intermediate (or first) conductive material which in turn is covered by a second conductive material. (Cf. Abstract) The second conductive layer is etched to form a cavity above the intermediate layer. Subsequently the intermediate conductive and the thin-film layers are selectively etched. The etchants used for the different conductive layers are different (Cf. Col 3). It would have been obvious to selectively etch a portion of the second conductive material and selectively etch a portion of the first conductive material if in fact Barraclough does not expressly teach these limitations since the device produced has a cavity therein and does have 2 conductive layers that are placed thereon and then are removed.

Claims 1-6, 13, 14, 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barraclough in view of Japan Pat No. 03-221922, by Yuichi et al (of record) or vice versa. The Barraclough teaching has been provided hereinabove and is not repeated. The Yuichi et al teaching has been provided in a previous Office action and also is not repeated. It would have been obvious to combine the two teachings and to construct a display device by providing by, for example, sputtering a driving circuit ( i.e. first conductive material) and a transparent film (comprising an  $\text{InSnO}_{(2)}$ ). ( N.B. The thin film devices taught by Barraclough will generally be flexible.) As applied to

claims 5 and 6 it would have been obvious that if one were soldering an electrical component to the circuit that the component would be electrically connected to the second (top-most) conductive material inasmuch as this would be expedient and practical. As applied to claims 13 and 14 it is held to be old and hence obvious to deposit at least one of the conductive materials by a vacuum means. In fact Yuichi et al do teach sputtering or electron beam evaporation of a noble metal onto a transparent substrate. (N.B. The sputtering process uses a vacuum.) As applied to claims 29-31 if indeed Barraclough does not expressly teach the specific limitations in these dependent claims. Nevertheless, it would have been obvious to e.g. etch the second conductive layer at a rate which is slower than that of a first rate (in order to properly provide the electrical circuit.

Applicants apparently have not comprehended the Office's position cogently provided in the Office Action (mailed on or about 05 March 2008 (Final) and the Office Action (mailed on or about 07 February 2008). The Office's position is that a PHOSITA would not have been able to make or use the claimed invention given Applicants' disclosure without the use of undue experimentation. Applicants recite *In re Wands* (Fed Cir 1988) and *U.S. v. Telectronics, Inc.* (Fed Cir. 1988) apparently to further an untenable position that the disclosure is enabling. Each Application is fact-specific and therefore what may be enabling in one Application may not be enabling in another Application.. On page 12 of Applicants' Remarks, filed on or about 05 September 2008 Applicants admit that they do not disclose examples of etchants that could be used to etch both the 1<sup>st</sup> and 2<sup>nd</sup> conductive materials. Nevertheless Applicants urge that ...one of ordinary skill in this

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art is capable of understanding how to select the proper etchant for the materials. The Office's position is that Applicants' conclusion is in error and at least one issue is joined. There is inadequate disclosure of the an agent that can be used to perform the recited acts or steps. However this is merely one of a host of factors that Applicants have failed to disclose to the reader in order for a PHOSITA to make or use the claimed invention. There is not a hint of the temperatures or temperature ranges, of times or time ranges for the non-disclosed etchants to etch each of the materials. There are no compositions of the materials listed in Applicants' disclosure. Applicants provide nothing more than broad statements about which a person skilled in this art would take an inordinate amount of time to make or use the claimed invention. With respect to claims 15, 16, 32-34, 39 and 40 Applicants urge *inter alia* that Barraclough does not teach ...selectively etching various layers of material using the same etchant... . What Applicants fail to realize is that the Office provides detailed reasoning to show that Applicants' disclosure is non-enabling. If one would locate another prior art document to cite against Applicants' claimed invention it would have been rather odd. The Office did not find the claimed subject in the precise manner that Applicants have claimed it because what Applicants have claimed is non-enabling. Applicants have failed to convince the Office that their claimed invention can be made or used without an inordinate amount of experimentation or efforts. Applicants urge with respect to the rejection of claims 1-6, 13, 14 and 26-31 over the prior art that the Office fails to understand comprehend what Applicants are urging when they recite... depositing a layer of a 1<sup>st</sup> conductive material onto a surface of a flexible substrate... . It appears

that Applicants have overlooked the fact that in Barracough claims there are no reference to the process (in Barracough) wherein the substrate must be flexible. Applicants will note that claimed invention in Barracough is independent of the flexibility (or non-flexibility) of the substrate. Moreover Applicants should be aware of the language in column 4 of Barracough whereat it is disclosed... This invention is not limited by the embodiment shown in the drawings and described... but only in accordance with the scope of the appended claims. Applicants are now provided with detailed and specific reasons for the Office's refusal to approve their claimed invention.

FURTHERMORE the Office Saith Not.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

/C. J. Arbes/  
Primary Examiner, Art Unit 3729

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